

PROGRAM: Living With Fire MODULE: On Campus – Dorm

MODULE OVERVIEW:

In a residential setting, students often underestimate the danger of a fire and frequently make decisions that place themselves at risk. This module utilizes case analysis and two video presentations to demonstrate the potential of fire. Students will be exposed to a methodical step-by-step procedure to follow when an alarm or detector sounds or when a fire strikes in their residential setting. This knowledge can serve as a foundation level guide to reduce the danger. As such, this program should not be presented or constructed as a definitive source of fire related instruction. Based on the nature of this lesson plan it should be expanded and or adapted to address local needs.

GENERAL DESCRIPTION:

Living with Fire is a unique, student-centered project that seeks to determine and address the needs of the student relating to the dangers of fire in the college environment. As students, you must now be capable of independently making the correct choices that affect your ability to survive should a fire develop.

This program will establish a national source for college fire related information and produce a series of new activities, events and educational resources specific to the college student. If we are going to make a difference and reduce the tragic effects of fire, we need your candid conversation and honest input. During this focus group, please provide as much input and discussion when responding to a question or discussion. Your assistance will help us to create quality programs that will save lives.

This module seeks to provide students with an increased awareness relative to the danger of fire. As such this program should not be presented or constructed as a definitive source of fire related instruction. Based on the limited nature of this lesson plan it should be expanded and or adapted to address local needs.

DISCLAIMER:

This lesson plan may not address all of the issues, needs, requirements and policies of your college or university. It's objective is to provide a basis for the development of a lesson plan specific to your institution. The instructor MUST evaluate the relevancy of the information in this lesson plan to your local conditions and use it as a resource to modify as necessary to address local needs.

INTERNET REFERENCE SOURCES:

American Cancer Society
www.cancer.org

Campus Firewatch
www.campus-firewatch.com

National Electric Manufacturers
Association
www.nema.org

National Fire Sprinkler Association
www.nfsa.org

NFPA International
www.nfpa.org

SimplexGrinnell
www.simplexgrinnell.com

United States Fire Administration
www.usfa.fema.gov

University of Texas System
www.utsystem.edu

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INSTRUCTOR TIME GUIDE:

This lesson should not exceed fifty minutes.

- 25 minutes – Classroom discussion of fire and fire protection systems
- 20 minutes – video presentation “Get Out and Stay Alive”
- 5 minutes – Demonstration of how to activate a fire alarm system.

METHODS OF INSTRUCTION:

- Lecture
- Video presentation
- Demonstration

RECOMMENDED MATERIALS, VISUAL AIDS & EQUIPMENT:

- Computer for PowerPoint presentation
- Projection screen
- PowerPoint presentation – assembled from materials located on the Living With Fire website, including photos from the Photo Library and video footage from the Live Burn
- Examples of items destroyed by fires such as computers, telephones, books, candles, etc.
- VCR
- Video “Get Out and Stay Alive” available through USFA (www.usfa.fema.gov)
- Fire alarm pull station
- Living With Fire student information bulletins (available on the Living With Fire website)
- Statistics on fire losses available from the NFPA (www.nfpa.org)

LEARNING OBJECTIVES:

- Provide the student with an overview of the increased risk of living on campus in a residence hall.
- Provide the student with basic ideas that can improve their safety.
- Provide the student with recommended actions to take in the event of a fire.
- To inform the student of the potential effects of risk taking behaviors.

A. Case Studies

1. Clemson University, Clemson South Carolina February 2000 - At approximately 6:30 a.m., a fire was detected on the fourth floor of a six-story dormitory at Clemson University. The cause of the fire was determined to be an unattended candle. Use of candles in the dormitories is against university policy.
2. University of Massachusetts – Amherst, Massachusetts – April 2000 - A fire in a high-rise dormitory was controlled with the activation of a single sprinkler head. A student was washing his clothes when there was a power failure. He took his wet clothes and proceeded to drape them over furniture and fixtures in his room to air-dry them. A t-shirt was placed over a halogen lamp (that was equipped with a guard), and a baseball cap was hung over the room's single station smoke detector. The student then went to bed.

Power was ultimately restored, and the lamp, which had been left in the "on" position, ignited the shirt. The shirt then fell down onto, and ignited, a couch and loveseat that the student had moved from the floor lounge into his room.

The student was awakened (unknown what awoke him) and he observed the fire. He proceeded to awaken his roommate, and they evacuated the room. As they opened the door to the corridor, smoke escaped from the room and activated a building fire alarm smoke alarm in the hallway. During this time, the room's sprinkler head activated.

3. University of Minnesota, Minneapolis, Minnesota September 2000 - An unattended candle started a fire in Roy Wilkins Hall. At approximately 11:00 p.m., a student was passing by the building and heard a smoke detector sounding. He activated the manual pull station, which alerted the occupants of the building.

According to university officials, the fire was started by an unattended candle on a coffee table in one of the apartments. The fire damage was limited to the coffee table, with smoke damage in the apartment. The unit was unoccupied at the time of the fire.

B. Attitude and perception

1. Public at large does not think that a fire will happen to them and students are no exception.
2. This often leads to complacency

C. Fire history in the college environment

1. 1700 fires occur per year, NOT including off campus
2. \$ 2.8 million in damage occur per year.

D. What is Fire

1. Relevant examples of fire
2. Two types of fire – smoldering and flaming fire

E. The Fire Triangle – smoldering fire

1. Three essential ingredients:
 - Oxygen – 21 % in normal air, fire burns until about 16% and then smolders
 - Fuel
 - Heat

F. States of fuel

1. Solid – paper, wood
2. Liquid - gasoline
3. Gas – natural gas, propane

G. Fire growth and development

1. Equilibrium - light a candle to show a fire in equilibrium
2. Rapid growth – show a Living with Fire Video segment available on the Living with Fire web site.

H. Where you live-control over your life

1. Common hazards
2. Smoking materials represent not only a health risk but also a serious a fire risk.
3. Candles and incense
4. Cooking
5. Halogen lights
6. Space heaters
7. Extension cords
8. Don't ever use flammable liquids

I. What to do

1. Have a fire extinguisher or know where one is
2. Know how to use a fire extinguisher
3. Know how to get out – at least two exits
4. Evacuate when the alarm sounds
5. Sound the alarm and warn others
6. Once out stay out

INSTRUCTOR NOTES**TEACHING POINTS**

7. Have a carbon monoxide detector

J. Awareness of the fire safety features of your building

1. Fire doors
2. Compartmentation
3. Exit stairwells
4. Fire alarm systems
5. Suppression systems

K. Occupant Awareness - How you live

1. Residence halls have a lot of people living close together.
2. Your actions may impact many "the needs of many outweigh the needs of one."
3. Smoking is a leading cause of fire deaths across the country. Banning smoking can help to significantly reduce one of the leading causes of fire fatalities
4. If smoking is allowed, make sure that ashtrays are available.
5. After a party, make sure ALL cigarettes are properly discarded

L. Fire detection & suppression– What you can expect

1. Fire alarm sensors report back to "brain" called the control panel. The panel manages alarm activation and communication via horn or voice. In addition this type of system routinely calls the fire department automatically when an alarm sounds. This system can detect smoke, heat or the activation of a fire suppression system.
2. Myths and realities of sprinkler systems
3. Fight or flight

M. Actions to take:

1. When the alarm sounds – evacuate
2. When fire breaks out – warn others, sound the alarm, evacuate
3. When an unsafe condition is observed (bagging smoke detectors) – bring it to the attention of the entire group
4. Don't bypass detection or suppression systems
5. Don't get burned – detail fire cause statistics

N. How Do You Survive?

- Know two ways to get out
- Test the door to see if it is hot
- Sound the alarm
- Warn others
- Don't ignore the alarm
- Don't go back in

INSTRUCTOR NOTES**TEACHING POINTS**

- Crawl low in smoke
 - Once outside dial 911
- O. Show the video "Get Out and Stay Alive"